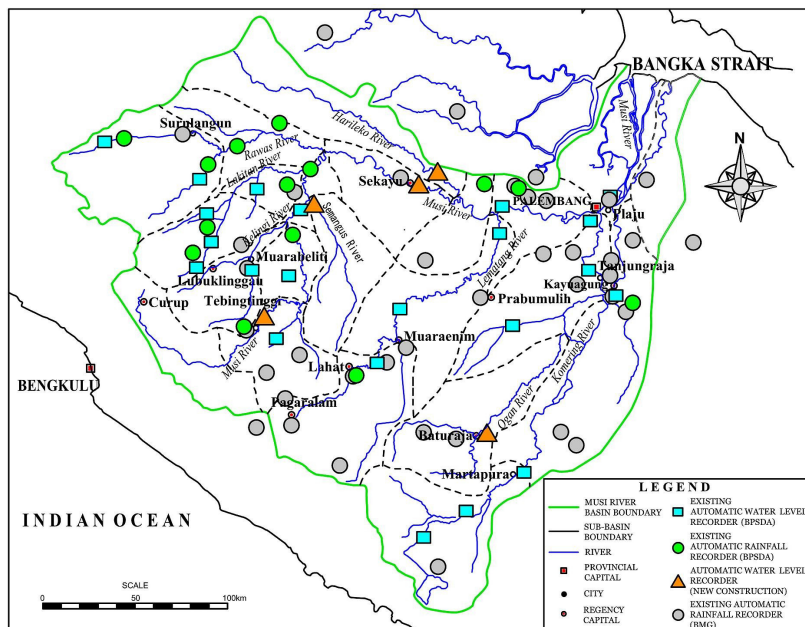


1. Program Title: Program 5-1
Hydrological Monitoring System Establishment

2. Location



3. Objectives

- To rationalize the monitoring network with proper observation and collection of hydrological data (meteorology, rainfall, water level, river discharge and sediment discharge) for basic analysis and study on water use.

4. Executing Agency

- Musi Balai PSDA under Dinas PU Pengairan in coordination with BMG and other relevant agencies

5. Program Description

(1) Inventory Survey (Program 5-1-1)

Musi Balai PSDA shall undertake a detailed inventory of the hydrometric stations and equipment in the field and in the office, their conditions and approximated costs of repair and upgrade. Prepare a plan to repair and rehabilitate hydrometric stations and to prepare list of equipment with cost for procurement.

(2) Establishment of Organization (Program 5-1-2)

Establish Water Resources Data and Information Unit in Musi Balai PSDA (**Program 6-5-1**). Musi Balai PSDA should coordinate with BMG and establish a rule for rainfall data transfer from BMG to Musi Balai PSDA.

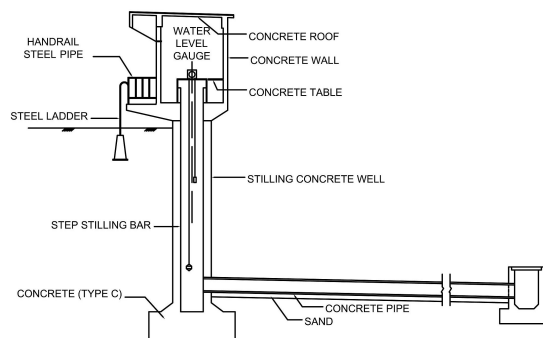
(3) Capacity Building (Program 5-1-3)

Musi Balai PSDA shall grasp present capability of hydrometric monitoring group and prepare a capacity building plan. Conduct capacity building to technical personnel for hydrological monitoring work.

(4) New Construction and Improvement of Facilities (Program 5-1-4)

The following five water level gaging stations are to be constructed to improve the distribution of stations and enhance the present monitoring system. Automatic water level gages of floating type are to be installed in the new stations.

- Musi River at Tebingtinggi (upstream of the Musi River)
- Musi River at Sekayu (midstream of the Musi River)
- Halireko River upstream point from confluence with the Musi River
- Semangus River upstream point from confluence with the Musi River
- Organ River at Baturaja



- A typical water level
- Rainfall and water level

rehabilitated, based on the results of the inventory survey conducted by Musi Balai PSDA in 2002. The survey result indicates as follows:

- A total of 4 meteorological stations need the improvement
- A total of 12 rainfall gaging station need the improvement
- A total of 22 water-level gaging station need the improvement

(5) Monitoring (Program 5-1-5)

Hydrological monitoring work shall be conducted following the proposed monitoring program (see Table G2.3.2). Required man-power: Chief hydrographer 1, Assist. hydrographer 2, Supporting staff 2, etc. Required equipment: Vehicle 2, Boat 1, Discharge measurement equipment 1, Bed load measurement equipment 1.

6. Implementation Schedule

Implementation schedule is as follows:

Priority Program		1st Year				2nd Year				3rd Year				4th Year				5th Year				6th Year				7th Year			
No.	Title	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
5-1	Hydrological monitoring system establishment	Preparation																											
5-1-1	Inventory survey	Preparation												Full Operation															
5-1-2	Establishment of organization and management	Full Operation																											
5-1-3	Capacity building	Full Operation																											
5-1-4	New construction and improvement of facilities	Full Operation																											
5-1-5	Monitoring	Full Operation																											

7. Program Cost

- (1) Program 5-1-1 n.a.
 - (2) Program 5-1-2 n.a.
 - (3) Program 5-1-3 Rp. 5 million/year
 - (4) Program 5-1-4
 - (a) New Construction of Water Level Gaging Station Rp. 1,200 million
 - (b) Improvement of Hydrological Observation Station Rp. 548 million
 1. Meteorological Station: (Rp. 184 million)
 2. Rainfall Station: (Rp. 100 million)
 3. Water Level Gaging Station: (Rp. 264 million)
 - (5) Program 5-1-5
 - (a) Monitoring equipment (initial cost) Rp. 800 million
 - (b) Monitoring man-power Rp. 93 million/year
- Total Initial cost: Rp. 2,548 million
Annual O&M cost: Rp. 98 million/year

8. Others